

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A container designing system that uses ~~using~~ a computer to design ~~for designing~~ a shape of a hollow container; comprising:

a parametric input module ~~inputting means~~ for inputting a parametrically defined shape condition;

a storage module ~~storing means~~ for storing said shape condition;

a solid model definition module ~~defining means~~ for defining a three-dimensional outer shape of said hollow container as a solid model that is at least partially filled up with contents on the basis of said shape condition; and

a solid model editor module ~~editing means~~ for subjecting said solid model to a secondary processing.

2. (Original) A container designing system as set forth in claim 1, wherein said solid model is subjected to a secondary processing after an outer shape of said hollow container is defined as a solid model.

3. (Currently Amended) A container designing system as set forth in claim 1, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a Boolean operation for altering a shape upon calculating one of a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

4. (Currently Amended) A container designing system as set forth in claim 1, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a fillet operation for ~~smoothly~~ rounding an intersecting portion of one plane with the other plane.

5. (Currently Amended) A container designing system as set forth in claim 1, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a deformable operation for altering a plane such that one of a positive load or a negative load is applied to the plane.

6. (Currently Amended) A container designing system as set forth in claim 1, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a spiral operation for generating a continuous spiral ~~rugged~~ shape on an exterior surface of said hollow container that protrudes a distance from said exterior surface in an arbitrary range of an axial direction.

7. (Currently Amended) A container designing system as set forth in claim 1, further comprising a capacity modulation module ~~modulating means~~ for performing a shape modulation upon said outer shape in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

8. (Currently Amended) A container designing system as set forth in claim 1, wherein a shape of a finish portion of said hollow container remains fixed when said outer shape is subjected to a secondary processing. ~~it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.~~

9. (Currently Amended) A container designing system as set forth in claim 7, wherein a shape of a finish portion of said hollow container remains fixed when said shape modulation is performed on said outer shape. ~~it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.~~

10. (Currently Amended) A container designing method that uses ~~using~~ a computer to design ~~for designing~~ a shape of a hollow container, wherein a parametrically defined shape condition is inputted and a three-dimensional outer shape of said hollow container is defined as a solid model that is at least partially filled up with contents on the basis of said shape condition and wherein ~~, after that,~~ said solid model is subjected to a secondary processing.

11. (Currently Amended) A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing that comprises ~~by using~~ a Boolean operation for altering a shape upon calculating one of a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

12. (Currently Amended) A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing that comprises ~~by using~~ a fillet operation for ~~smoothly~~ rounding an intersecting portion of one plane with the other plane.

13. (Currently Amended) A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing that comprises ~~by using~~ a deformable operation for altering a plane such that one of a positive load or a negative load is applied to the plane.

14. (Currently Amended) A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing that comprises by using a spiral operation for generating a continuous ~~spiral~~ rugged shape on an exterior surface of said hollow container that protrudes a distance from said exterior surface in an arbitrary range of an axial direction.

15. (Original) A container designing method as set forth in claim 10, wherein a shape modulation upon said outer shape is performed in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

16. (Currently Amended) A container designing method as set forth in claim 10, wherein a shape of a finish portion of said hollow container remains fixed when said outer shape is subjected to a secondary processing. ~~it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.~~

17. (Currently Amended) A container designing method as set forth in claim 15, wherein a shape of a finish portion of said hollow container remains fixed when said shape modulation is performed on said outer shape. ~~it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.~~

18. (Currently Amended) A container designing system, ~~comprising: program~~
~~for carrying out by a computer:~~

a computer-readable medium that is encoded with a container designing
program, wherein the container designing program includes:

a parametric input module ~~inputting means~~ for inputting a
parametrically defined shape condition;

a storage module ~~storing means~~ for storing said shape condition;

a solid model definition module ~~defining means~~ for defining a three-
dimensional outer shape of a hollow container as a solid model that is at least partially
filled up with contents on the basis of said shape condition; and

a solid model editor module ~~editing means~~ for subjecting said solid
model to a secondary processing[.]; and

a computer that communicates with said computer-readable medium and
that executes said container designing program.

19. (Currently Amended) A container designing system ~~program~~ as set forth in
claim 18, wherein said solid model is subjected to a secondary processing after an
outer shape of said hollow container is defined as a solid model.

20. (Currently Amended) A container designing system program as set forth in claim 18, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes by using a Boolean operation for altering a shape upon calculating one of a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

21. (Currently Amended) A container designing system program as set forth in claim 18, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes by using a fillet operation for ~~smoothly~~ rounding an intersecting portion of one plane with the other plane.

22. (Currently Amended) A container designing system program as set forth in claim 18, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes by using a deformable operation for altering a plane such that one of a positive load or a negative load is applied to the plane.

23. (Currently Amended) A container designing system ~~program~~ as set forth in claim 18, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes by using a spiral operation for generating a continuous spiral rugged shape on an exterior surface of said hollow container that protrudes a distance from said exterior surface in an arbitrary range of an axial direction.

24. (Currently Amended) A container designing system ~~program~~ as set forth in claim 18, further comprising wherein a capacity modulation module ~~modulating means~~ ~~is comprised~~ for performing a shape modulation upon said outer shape in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

25. (Currently Amended) A container designing system ~~program~~ as set forth in claim 18, wherein a shape of a finish portion of said hollow container remains fixed when said outer shape is subjected to a secondary processing. ~~it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.~~

26. (Currently Amended) A container designing system ~~program~~ as set forth in claim 24, wherein a shape of a finish portion of said hollow container remains fixed when said shape modulation is performed on said outer shape. ~~it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.~~

27. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program, wherein said container designing program is executed ~~for carrying out~~ by a computer and wherein said container designing program includes:

a parametric input module ~~inputting means~~ for inputting a parametrically defined shape condition;

a storage module ~~storing means~~ for storing said shape condition;

a solid model definition module ~~defining means~~ for defining a three-dimensional outer shape of a hollow container as a solid model that is at least partially filled up with contents on the basis of said shape condition; and

a solid model editor module ~~editing means~~ for subjecting said solid model to a secondary processing.

28. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, wherein said solid model is subjected to a secondary processing after an outer shape of said hollow container is defined as a solid model.

29. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a Boolean operation for altering a shape upon calculating one of a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

30. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a fillet operation for ~~smoothly~~ rounding an intersecting portion of one plane with the other plane.

31. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a deformable operation for altering a plane such that one of a positive load or a negative load is applied to the plane.

32. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, wherein said solid model editor module ~~editing means~~ subjects said solid model to a secondary processing and wherein said secondary processing includes ~~by using~~ a spiral operation for generating a continuous spiral ~~rugged~~ shape on an exterior surface on said hollow container that protrudes a distance from said exterior surface in an arbitrary range of an axial direction.

33. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, further comprising ~~wherein~~ a capacity modulation module ~~modulating means is comprised~~ for performing a shape modulation upon said outer shape in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

34. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 27, wherein a shape of a finish portion of said hollow container remains fixed when said outer shape is subjected to a secondary processing. ~~it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.~~

35. (Currently Amended) A computer-accessible recording medium that is encoded with ~~recording~~ a container designing program as set forth in claim 33, wherein a shape of a finish portion of said hollow container remains fixed when said shape modulation is performed on said outer shape. ~~it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.~~